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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/387,534	08/31/1999	FELIKS DUJMENOVIC	0100.9901020	2713

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EXAMINER
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SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 10/08/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/387,534

Applicant(s)

DUJMENOVIC ET AL.

Examiner

Annan Q Shang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Objections***

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not provide adequate support to substantiate the notion that fields of video from two separate channels can occur "adjacent in time" as claimed. There is no disclosure regarding the synchronization of multiple channels with respect to their vertical blanking intervals. However, the limitation "adjacent in time" appears to require synchronization or at the very least, a circumstance whereby two independently broadcast channels, are in synchronization by chance. A circumstance which by highly unlikely.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 8, 9 and 11, are rejected under 35 U.S.C. 102(b) as being anticipated by **Dangschat (5,173,777)**.

As to claim 8, note the **Dangschat** reference figure 1, discloses a circuit configuration for inset-image keying in a television set having only one tuner and further discloses a method of providing video. The claimed method comprising...is met as follows: Tuner 1, switches over two frequencies, tunes to a first frequency, and receives an image or picture and stores in half-frame memory device 8, note figure 1, col. 4, line 34-col. 5, line 2 and line 14-40, note that half-frame "a first field of video associated with the first frequency" is stored, and tunes to a second frequency and receives an image or picture and stores in half-frame memory device 6, "a second field of video...second frequency, and where the period of time in which switchover device 4 switches to the small-image signal route 20 is selected to be precisely long enough for tuner 1 to jump to the tuning frequency for the second program, for a new half image to be inscribed in the small-image memory device 6 and for the tuning frequency of tuner 1 to jump back to the first program, note col. 5, line 55-col. 6, line 17. Dangschat further discloses tuning tuner 1 to the first frequency and receives and stores images or pictures in half-frame device 6 or 8 and displays an image at location "A" "LARGE IMAGE" on display device 30 and displays an image at location "B" "SMALL IMAGE" note that the period of time in which switchover device 4 switches to the small-image signal route 20 is selected to be precisely long enough for tuner 1 to jump to the tuning frequency for the

second program and provides full motion video sequence, note col. 6, lines 10-30. Note further that Dangschat stores first, second, third, etc., half frames "fields" in a half frame memory to produce a "reduce motion resolution" (col. 6, lines 45-51). The "reduce motion resolution" still meets "substantially full motion video"

As to claim 9 and 11, note the **Dangschat** reference figure 1, discloses a circuit configuration for inset-image keying in a television set having only one tuner and further discloses a method of displaying video comprising a tuner 1 that switches between a first received frequency and a second received frequency and stores half-image or frame, note figure 1, col. 4, line 34-col. 5, line 2, line 14-40 and col. 6, lines 10-30, and simultaneously displays the half-image or frame set as reduce motion video, note an image at location "A" "LARGE IMAGE" on display device 30 and an image at location "B" "SMALL IMAGE."

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 5 AND 6, are rejected under 35 U.S.C. 102(e) as being anticipated by **Dangschat (5,173,777)** in view of **Shirahata (5,825,429)**

As to claims 1, note the **Dangschat** reference figure 1, discloses a circuit configuration for inset-image keying in a television set having only one tuner and further discloses a method of tuning a system. The claimed method comprising...is met as

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follows: Tuner 1, switches over two frequencies, tunes to a first frequency, and receives an image or picture and stores in half-frame memory device 8, note figure 1, col. 4, line 34-col. 5, line 2 and line 14-40, note that half-frame "a first field of video associated with the first frequency" is stored, and tunes to a second frequency and receives an image or picture and stores in half-frame memory device 6, "a second field of video...second frequency, and where the period of time in which switchover device 4 switches to the small-image signal route 20 is selected to be precisely long enough for tuner 1 to jump to the tuning frequency for the second program, for a new half image to be inscribed in the small-image memory device 6 and for the tuning frequency of tuner 1 to jump back to the first program, note col. 5, line 55-col. 6, line 17.

Dangschat fails to explicitly teach displaying the first field of video as substantially full motion video by interpolating missing fields of video not receiver by the video tuner and displaying the second field of video as substantially full motion video by interpolating missing fields of video not received by the video tuner.

However, note **Shirahata** reference figure 1, discloses an apparatus and method for generating interpolated image data and reproducing blurr-free high-quality frame image data, from a moving picture. A field image comprising pixels of odd lines and even lines that are alternately applied to construct and display on a television a frame, where the frame image is constructed from two consecutive field images and furthermore in the case of a missing field, a second field is generated by interpolation processing (col. 5, lines 31-65, col. 6, lines 45-57 and col. 8, lines 5-28).

There it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Shirahata into the system of Dangschat to interpolate missing fields to obtain blurr-free high-quality image data or full motion video.

Dangschat fails to explicitly teach displaying substantially full-motion video based upon the first field of video and the third field at the first location of the display as substantially full motion video by interpolating missing fields of video not receiver by the video tuner and displaying the second field of video as substantially full motion video by interpolating missing fields of video not received by the video tuner.

However, note **Shirahata** reference figure 1, discloses an apparatus and method for generating interpolated image data and reproducing blurr-free high-quality frame image data, from a moving picture. A field image comprising pixels of odd lines and even lines that are alternately applied to construct and display on a television a frame, where the frame image is constructed from two consecutive field images and furthermore in the case of a missing field, a second field is generated by interpolation processing (col. 5, lines 31-65, col. 6, lines 45-57 and col. 8, lines 5-28).

There it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Shirahata into the system of Dangschat to interpolate missing fields to obtain blurr-free high-quality image data or full motion video.

As to claims 3, Dangschat further inherently teaches providing a second frequency indicator to the tuner 1 prior to the step of tuning tuner 1 to a second

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frequency (col. 4, lines 34-43), note that the switching over between the two frequencies is accomplished by a control signal which may be stored in a control device 9 to provide the necessary frequency indicator or control signal.

As to claims 5 and 6, Dangschat further discloses a method comprising switching over at a correct time in such a manner to allow storing of image A and B in memory and "repeated readout of the most recently stored" large/small image as a new half-image or frame is inscribed in the memory devices 6 and 8, note col. 5, line 63-col. 6, line 17, since the switching over causes alternative storing of half-images of large/small image A and B. Hence, the first field, second and third fields as claimed, are retrieve and displayed and are adjacent frames of a common video image or picture and displayed simultaneously on display device 30, note further that the switching over causes no half-image being transmitted at the second frequency after the first data of the first large-image and before the first data of the small image.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Dangschat (5,173,777)** as applied to claim 8 above, and further in view of **Izumi (6,233,227)**.

As to claim 10, Dangschat teaches alternating reception of tuner 1 in a time maximum of 100 msec (col. 6, lines 15-17). Dangschat, fails to explicitly teach alternating reception in approximately 1.2 milliseconds.

However, **Izumi** teaches transmitting and receiving apparatus, where transmission and reception changeover switch 113, alternates frequencies in 1 millisecond (figures 1, 7, col. 3, line 63-col. 4, line 5 and col.7, lines 11-20).



Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Izumi into the system of Dangschat to provide a switch or controller that can switch between frequencies in a millisecond and accurately receive information accordingly.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Dangschat (5,173,777)** as applied to claim 8 above, and further in view of **Trovato et al (6,445,306)**.

As to claim 12, Dangschat fails to explicitly teach displaying the first field set and second field set as full motion video on different display devices.

However, **Trovato** teaches a receiving system that can indicate full motion video on the appliance 150 and Remote Controller 110 (figures 1, 6, 7, col. 4, lines 30-40 and col. 10, line 48-col. 11, line 7).

Therefore it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Trovato into the system of Dangschat to provide a separate display devices for the large/small image in order to permit another viewer to watch the other motion video on a separate display device.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Dangschat (5,173,777)** in view of **Shirahata (5,825,429)** as applied to claim 1 above, and further in view of **Dougherty et al (5,737,025)**.

As claim 2, Dangschat as modified by Shirahata fail to explicitly teach switching to a second frequency during the vertical blanking interval (VBI).

However, **Dougherty** teaches co-channel transmission of program signals and ancillary signals and further teaches spreading the ancillary codes over several frequencies and a Microprocessor (M) 70, Decoder 60 and Filter 62 (figure 4 and col. 9, lines 30-55), where M 70 controls the switching the various frequencies during the VBI (col. 9, lines 52-62).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Dougherty into the system of Dangschat as modified by Shirahata to switch to other frequencies during the VBI and avoid interfering with the video signals in the active video periods.

10. Claim 4, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dangschat (5,173,777)** in view of **Shirahata (5,825,429)** as applied to claim 1 above, and further in view of **Izumi (6,233,227)**.

As to claim 4, Dangschat teaches alternating reception of tuner 1 in a time maximum of 100 msec (col. 6, lines 15-17). Dangschat as modified by Shirahata, fail to explicitly teach alternating reception in approximately 1.2 milliseconds.

However, **Izumi** teaches transmitting and receiving apparatus, where transmission and reception changeover switch 113, alternates frequencies in 1 millisecond (figures 1, 7, col. 3, line 63-col. 4, line 5 and col.7, lines 11-20).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Izumi into the system of Dangschat as modified by Shirahata to provide a switch or controller that can switch between frequencies in a millisecond and accurately receive information accordingly.

***Response to Arguments***

11. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection discussed above. The rejection of claims 1 and 8, under 35 U.S.C. 112, first paragraph, is still maintained since the cited pages in the specification does not provide adequate support to substantiate the notion that fields of video from two separate channels can occur "adjacent in time" as claimed. There is no disclosure regarding the synchronization of multiple channels with respect to their vertical blanking intervals. However, the limitation "adjacent in time" appears to require synchronization or at the very least, a circumstance whereby two independently broadcast channels, are in synchronization by chance. A circumstance which by highly unlikely. Applicant further argues that Dangschat does not display "substantially full motion video." Examiner disagrees since Dangschat teaching of "reduce motion resolution" (col. 6, lines 45-51) still meets motion video. Applicant's amendment to the all claims necessitated the new ground(s) of rejection discussed above. This Office Action is made FINAL.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mancuso et al (6,240,211) disclose method for motion estimated and compensated filed rate up-conversion..." where missing fields are interpolated (col. 1, lines 10-57)

Kianush et al (6,094,568) discloses "radio receiver for receiving a main radio broadcast signal and ..." where microcontroller utilizing a serial communications bus to alternate frequencies in 1 millisecond (figure 1, col. 4, lines 1-35 and col. 6, lines 17-45).

Stuettler (6,040,852) discloses method and device for the recording and reproduction of stereoscopic video images and further teaches an Interpolator (col. 3, lines 40-66).

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q Shang** whose telephone number is **703-305-2156**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W Miller** can be reached on **703-305-4795**. The fax phone numbers

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for the organization where this application or proceeding is assigned are **703-746-5991**

for regular communications and **703-746-5991** for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Customer Service** whose telephone number is

**703-306-0377.**

A handwritten signature in black ink, appearing to be 'AS' with a stylized flourish.

Annan Q. Shang

A handwritten signature in black ink, appearing to be 'J Miller' with a stylized flourish.

JOHN MILLER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600